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# Factors Relating to Discharge for Unsuitability Among 1956 Airman Accessions to the Air Force

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By  
Eli S. Flyer

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UNITED STATES AIR FORCE  
LACKLAND AIR FORCE BASE, TEXAS

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**WADC-TN-59-201**  
**December 1959**

**FACTORS RELATING TO DISCHARGE FOR UNSUITABILITY  
AMONG 1956 AIRMAN ACCESSIONS TO THE AIR FORCE**

**By**  
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**Project 7719, Task 17155**

**Personnel Laboratory  
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### **Abstract**

**This report provides major findings from a large-scale research investigation in which suitable and unsuitable airmen were compared for a number of personal attributes. Educational level was found to be the best single predictor of unsuitability discharge, although aptitude and age considered in conjunction with educational level increased significantly the accuracy of prediction. The implications of the findings for current selection procedures are discussed.**

### **Publication Review**

**This report has been reviewed and is approved.**

**Fred E. Holdrege, Col, USAF, Chief  
Personnel Laboratory**

**A. Carp, Technical Director  
Personnel Laboratory**

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## **Factors Relating to Discharge for Unsuitability Among 1956 Airman Accessions to the Air Force\***

### **Problem**

During the first ten months of 1958 about 16,000 airmen were discharged from the Air Force for unsuitability. The considerable impact of attrition of this type upon Air Force resources and effectiveness resulted in a requirement for a screening device to predict behavior and emotional suitability for military service. The screening technique would be used by the Recruiting Service to reduce the number of airmen enlisted by the Air Force who are later eliminated for unsuitability.

The purpose of this report is to provide major findings from a large-scale research investigation in which suitable and unsuitable airmen were compared for a number of personal attributes, and to discuss the implications of these findings for current selection procedures.

### **Procedure**

The approach followed in this investigation consisted of identifying all airman accessions to the Air Force during calendar 1956, and determining which members of this group were discharged for unsuitability. Files maintained by the Personnel Laboratory permitted identification of the 1956 accession group, and contained aptitude and other information for most of the airmen concerned. In addition, the Laboratory maintains a file of Air-Force-wide discharge and separation information. By matching the two sources of information, two airman groups were identified from the 1956 airman accession population: (1) airmen discharged or separated from service, and (2) airmen currently on active duty. Since some of the airman attrition consisted of discharges and separations for other reasons than unsuitability, these cases were removed from the loss group.

Comparisons could now be made between suitable airmen (still on active duty) and unsuitable airmen from the 1956 accession population.

### **The Samples**

Results from matching the 1956 airman accession information with separation and discharge files are shown in Table 1. Through 1 March 1959 there were over 9,700 discharges for unsuitability among the 106,000 basic airmen entering the Air Force during 1956. An additional 2,300 airmen were discharged for physical reasons, and 1,700 were separated involuntarily for lack of advancement. These losses are minimum estimates, since the separation and discharge files may not be complete;<sup>1</sup> accordingly, among the

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\* Manuscript released by the author for publication as a Technical Note in December 1959.

<sup>1</sup> Separation and discharge data were abstracted from airman "Change of Status" IBM card decks forwarded to Personnel Laboratory monthly by Statistical Services, Headquarters USAF.

92,487 airmen estimated to be on active duty status, a number may actually have been discharged or separated from the service.

**TABLE 1**  
**Status of the 1956 Airman Accessions,**  
**1 March 1959**

Total Entry	106,293
Unsuitable Discharge <sup>a</sup>	9,768
Physical Discharge	2,307
Involuntary Separation <sup>b</sup>	1,731
On Active Duty	92,487

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<sup>a</sup>Discharge categories include: 39-16, 39-17, 39-18, and 39-22.

<sup>b</sup>Involuntary separation of airmen who have not progressed sufficiently during their first tour of duty.

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It was uneconomical from a statistical analysis standpoint to compare all 92,487 suitable airmen with all 9,768 unsuitable airmen. Instead, every twentieth suitable airman was selected for inclusion in a random sample of suitable airmen, and every third unsuitable airman selected for inclusion in a random sample of unsuitable airmen. Score frequencies obtained through statistical analysis involving the two samples were multiplied by the appropriate factor (20 or 3) to reproduce the parent population from which the cases were drawn.

Table 2 provides additional information about the unsuitable airman group. More than 64 percent of the discharges were under Air Force Regulation 39-16 for inaptitude or unsuitability. Airmen discharged for homosexuality (AFR 35-66) were inadvertently excluded from the study, but since less than 300 airmen were in this category, the omission of this group had little effect upon the results that follow.

### **Factors Related to Unsuitability Discharge**

#### **Length of Service**

The relationship between length of service and discharge for unsuitability is shown in Table 3. Since only those airmen discharged through 1 March 1959 were included in this study, the length of service for the 1956 accessions at this point in time ranged from 26 to 38 months of service. Accordingly the attrition shown in Table 3 will increase for the later



**TABLE 2**  
**Number and Type of Unsuitable Airmen**

<u>Air Force Regulation</u>	<u>Number</u>	<u>Percent of Total</u>
39-16 Inaptitude or Unsuitability	6297	64.5
39-17 Unfitness	2325	23.8
39-18 Dishonorable or Bad Conduct Discharge	483	4.9
39-22 Conviction by Civil Courts	663	6.8
Total	9768	100.0

**TABLE 3**  
**Relationship Between Length of Service and Discharge for Unsuitability**

<u>Length of Service in Months at Time of Discharge</u>	<u>Number of Unsuitable Airmen</u>	<u>Percentage of the Unsuitable Airman Group</u>
1 - 5	1155	11.8
6 - 11	1212	12.4
12 - 17	1754	17.9
18 - 23	2114	21.7
24 - 29	2072	21.3
30 - 35	1116	11.4
36 or more	345	3.5
Total	9768	100.0

"length of service in months" groups as the population gains increased service time.<sup>2</sup> The data also indicate a small but positive relationship between length of service and number of discharges for unsuitability—each successive six-month period has a larger number of discharged airmen.<sup>3</sup> While the unsuitability discharge rate for the 1956 airman group was 9.5 per cent through 1 March 1959, by the end of the four-year enlistment period, the rate could be expected to be between 12 and 15 per cent.

<sup>2</sup> For example, one-third of the airmen in the 1956 accession population had not passed the 24-29 months of service period as of 1 March 1959. When the maturation factor is considered, an estimate of attrition for this period of service is about 2,500 discharges, compared to the 2,072 airmen eliminated prior to 1 March 1959.

<sup>3</sup> One possible explanation of this finding is that repeated offense data are often required to build a good case for an unsuitability discharge.

## Education

One important finding in the investigation is shown in Table 4. There is a high positive relationship between educational level attained prior to service and unsuitability discharge from the Air Force. For airmen who were high-school graduates, the discharge rate was 3 per cent; for airmen with eighth grade or less education the rate was over 25 per cent. Some irregularities are evident in the results, however. For example, airmen with two years of college had a lower attrition rate than airmen with three years of college. Since the frequencies involved at these levels are small, the differences may be no more than chance.<sup>4</sup>

**TABLE 4**

**Relationship Between Years of Education and Unsuitability Discharge from the Air Force  
(Sample: 1956 basic airman accessions to the Air Force)**

<u>Years of Education</u>	<u>Suitable Airmen</u>	<u>Unsuitable Airmen</u>	<u>Total</u>	<u>Percentage Unsuitable</u>
16	284	9	293	3.1
15	183	12	195	6.2
14	1380	24	1404	1.7
13	3288	81	3369	2.4
12	52140	1737	53877	3.2
11	10595	1635	12230	13.4
10	12604	2610	15214	17.2
9	7104	1818	8922	20.4
8	3755	1293	5048	25.6
7	649	225	874	25.7
6	183	72	255	28.2
Total	92165	9516	101681	9.4
Mean	11.25	10.02		

Standard Deviation = 1.51

Validity Coefficient ( $r$  biserial) = .42

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<sup>4</sup> On the other hand, perhaps these are differences in performance one might expect from a junior college graduate group (14 years of education) as opposed to that of a group leaving college one year before graduation (15 years of education).

Estimates have been made that before the 1956 accession group completes its four-year tour, the unsuitability discharge rate will be over 12 per cent. This increase will affect sharply the percentage of airmen eliminated who possess eleven or less years of education. With a total group attrition of about 12 per cent, for example, more than 34 per cent of airmen with eight or less years of education will have been discharged as unsuitable, compared to 4 per cent attrition for the high-school graduates.<sup>5</sup>

### Age

Due to the large differences in unsuitability discharge rates between high-school graduates (3 per cent) and non-high-school graduates (18 per cent), it appeared worth while to consider these two groups separately in comparing suitable and unsuitable airman groups for other characteristics. In Table 5 data are presented showing the relationship between age at entry into the Air Force and unsuitability discharge for high-school and non-high-school graduates separately, and a similar analysis for the total group. In all three analyses the 17-year-old group has a higher attrition rate for unsuitability than any other age group. Within the non-high-school graduate group the relationship is linear—the older the airman at entry into service, the less likely he is to be discharged for unsuitability. Among high-school graduates, however, only the 17-year-olds are eliminated at a different rate than other age groups.

### Aptitude

Relationships between Armed Forces Qualification Test (AFQT) scores and unsuitability discharge are shown in Tables 6, 7, and 8; in Table 6 the AFQT is considered in terms of four mental-level categories; in Table 7 by percentile grouping, and in Table 8 the analysis is in terms of interactions between AFQT and high-school-graduate status. Of particular interest is the finding shown in Tables 6 and 7 that the unsuitability discharge rate for the lowest aptitude group of high-school graduates is lower than the discharge rate for the highest aptitude group of non-high-school graduates. Among the non-high-school graduates in AFQT Category I the unsuitability discharge rate is over 12 per cent; among the high-school graduates in AFQT Category IV, the rate is less than 6 per cent.<sup>6</sup>

In Table 8 the data are grouped in a different manner than in the preceding two tables and permit answers to another set of questions. For example, if the Air Force had not accepted any AFQT Category IV airmen who were non-high-school graduates, data from the table indicate that unsuitability discharge would have been reduced by over 27 per cent at the expense of ten per cent of the suitable airman group. Further, if the Air Force had accepted only high-school graduates for enlistment, the unsuitability discharges would have been reduced by over 80 per cent, but at the expense of 40 per cent of the suitable airman group.

(Text continues on page 15)

<sup>5</sup> If airmen who were separated involuntarily for lack of advancement had been included with the unsuitable discharges, the projected attrition rate for airmen with eighth grade or less education would be over 40 per cent.

<sup>6</sup> This finding is due in part to grouping together all non-high-school graduates (from six to eleven years of education). Comparison between high-aptitude eleventh graders and low-aptitude twelfth graders would not have resulted in differences in attrition rates of the type shown in Tables 6 and 7.

**TABLE 5**  
**Relationship Between Years of Age and Unsuitability Discharge from the Air Force--**  
**Overall and Within High School-Non High School Graduate Groupings**  
**(Sample: 1956 basic airman accessions to the Air Force)**

Years of Age	Total Group			Non-High School Graduates				High School Graduates			
	Suitable Airmen	Unsuitable Airmen	Percentage Unsuitable	Suitable Airmen	Unsuitable Airmen	Percentage Unsuitable		Suitable Airmen	Unsuitable Airmen	Percentage Unsuitable	
23+	1400	57	3.9	466	27	5.5		934	30	3.1	
22	3126	147	4.5	954	78	7.6		2172	69	3.1	
21	5724	306	5.1	1421	165	10.4		4303	141	3.2	
20	11467	621	5.1	2335	336	12.3		9072	285	3.1	
19	24010	1374	5.4	4810	753	13.5		19200	621	3.1	
18	30749	3024	8.9	11508	2403	17.3		19241	621	3.1	
17	14917	4047	21.3	13456	3963	22.8		1461	84	5.4	
Total	91393	9576	9.5	35010	7725	18.1		56383	1851	3.2	
Mean	18.75	18.04		18.19	17.79			19.10	19.06		

Standard Deviation = 1.38  
Validity (r biserial) = .26

Standard Deviation = 1.34  
Validity (r biserial) = .17

Standard Deviation = 1.43  
Validity (r biserial) = .01

**TABLE 6**  
**Relationship Between AFQT Category and Unsuitability Discharge from the Air Force--Overall**  
**and Within High School-Non High School Graduate Groupings**  
**(Sample: 1956 basic airman accessions to the Air Force)**

AFQT Category	Total Group			Non-High School Graduates			High School Graduates		
	Suitable Airmen	Unsuitable Airmen	Percentage Unsuitable	Suitable Airmen	Unsuitable Airmen	Percentage Unsuitable	Suitable Airmen	Unsuitable Airmen	Percentage Unsuitable
I	6089	207	3.3	804	114	12.4	5285	93	1.7
II	20648	1221	5.6	4993	825	14.2	15655	396	2.5
III	34398	3843	10.0	15669	3186	16.9	18729	657	3.4
IV	12138	2385	16.4	7496	2109	22.0	4642	276	5.6
Total	73273	7656	9.5	28962	6234	17.7	44311	1422	3.1

**TABLE 7**  
**Relationship Between Armed Forces Qualification Test Scores and Unsuitability Discharge**  
**from the Air Force--Overall and Within High School-Non High School Graduate Groupings**  
**(Sample: 1956 basic airman excessions to the Air Force)**

Armed Forces Qualification Test Percentile Scores	Total Group			Non-High School Graduates				High School Graduates			
	Suitable Airmen	Unsuitable Airmen	Percentage Unsuitable	Suitable Airmen	Unsuitable Airmen	Percentage Unsuitable	Percentage Unsuitable	Suitable Airmen	Unsuitable Airmen	Percentage Unsuitable	Percentage Unsuitable
90 - 95	7144	234	3.2	1035	129	11.1		6109	105	1.7	
80 - 85	7185	300	4.0	1502	180	10.7		5683	120	2.1	
70 - 75	8179	543	6.2	2009	357	15.1		6170	186	2.9	
60 - 65	8137	627	7.2	2374	462	16.3		5763	165	2.8	
50 - 55	9698	855	8.1	3873	702	15.3		5825	153	2.6	
40 - 45	10269	1203	10.5	4566	993	17.9		5703	210	3.6	
30 - 35	12117	1692	12.3	6698	1455	17.8		5419	237	4.2	
25 and below	11060	2202	16.6	6981	1956	21.9		4079	246	5.7	
Total	73789	7656	9.4	29038	6234	17.7		44751	1422	3.1	
Mean	55.50	44.21		46.09	42.08			61.60	53.58		
	Standard Deviation = 22.99			Standard Deviation = 19.93				Standard Deviation = 22.76			
	Validity (r biserial) = .25			Validity (r biserial) = .11				Validity (r biserial) = .15			

**TABLE 8**  
**Percentage Distributions of AFQT and High School Graduate Status**  
**for Suitable and Unsuitable Airmen Groups**  
**(Sample: 1956 basic airman accessions to the Air Force)**

Suitable Airmen		Sample of Suitable Airmen	Unsuitable Airmen		Sample of Unsuitable Airmen
High School Graduates and AFQT	I	7.2	High School Graduates and AFQT	I	1.2
High School Graduates and AFQT	II	21.4	High School Graduates and AFQT	II	5.2
High School Graduates and AFQT	III	25.6	High School Graduates and AFQT	III	8.6
High School Graduates and AFQT	IV	6.3	High School Graduates and AFQT	IV	3.6
Non-High School Graduates and AFQT	I	1.1	Non-High School Graduates and AFQT	I	1.5
Non-High School Graduates and AFQT	II	6.8	Non-High School Graduates and AFQT	II	10.8
Non-High School Graduates and AFQT	III	21.4	Non-High School Graduates and AFQT	III	41.6
Non-High School Graduates and AFQT	IV	10.2	Non-High School Graduates and AFQT	IV	27.5
Total		100.0	Total		100.0
High School Graduates		60.5	High School Graduates		18.6
Non-High School Graduates		39.5	Non-High School Graduates		81.4

**TABLE 9**  
**Relationship Between Mechanical Aptitude and Unsuitability Discharge from the Air Force --**  
**Overall and Within High School-Non High School Graduate Groupings**  
 (Sample: 1956 basic airman accessions to the Air Force)

Mechanical Aptitude Percentile Scores <sup>a</sup>	Total Group			Non-High School Graduates			High School Graduates		
	Suitable Airmen	Unsuitable Airmen	Percentage Unsuitable	Suitable Airmen	Unsuitable Airmen	Percentage Unsuitable	Suitable Airmen	Unsuitable Airmen	Percentage Unsuitable
90 - 95	3430	210	5.8	812	147	15.3	2618	63	02.3
80 - 85	8240	471	5.4	2090	309	12.9	6150	162	02.6
70 - 75	9621	771	7.4	2984	561	15.8	6637	210	03.1
60 - 65	10552	900	7.9	3734	711	16.0	6818	189	02.7
50 - 55	12951	1074	7.7	4893	870	15.1	8058	204	02.5
40 - 45	12279	1356	9.9	5013	1104	18.0	7266	252	03.4
30 - 35	12624	1542	10.2	5703	1296	18.5	6921	246	03.4
20 - 25	10290	1434	12.2	4830	1209	20.0	5460	225	04.0
10 - 15	10026	1551	13.4	4708	1302	21.7	5318	249	04.5
01 - 05	2455	429	14.9	791	339	30.0	1664	90	05.1
Total	92468	9738	9.5	35558	7848	18.1	56910	1890	03.2
Mean	46.69	39.65		42.69	38.52		49.19	44.33	

Standard Deviation = 23.73

Validity (r biserial) = .15

Standard Deviation = 22.42

Validity (r biserial) = .10

Standard Deviation = 24.15

Validity (r biserial) = .09

<sup>a</sup> Airman Classification Battery AC-2A



**TABLE 10**  
**Relationship Between Administrative Aptitude and Unsuitability Discharge from the Air Force--**  
**Overall and Within High School-Non High School Graduate Groupings**  
**(Sample: 1956 basic airman accessions to the Air Force)**

Administrative <sup>a</sup> Aptitude Percentile Scores	Total Group			Non-High School Graduates			High School Graduates		
	Suitable Airmen	Unsuitable Airmen	Percentage Unsuitable	Suitable Airmen	Unsuitable Airmen	Percentage Unsuitable	Suitable Airmen	Unsuitable Airmen	Percentage Unsuitable
90 - 95	1177	51	4.1	81	15	15.6	1096	36	3.2
80 - 85	4810	165	3.3	243	60	19.8	4567	105	2.2
70 - 75	7692	297	3.7	832	126	13.1	6860	171	2.4
60 - 65	9357	477	4.9	1665	300	15.3	7692	177	2.2
50 - 55	8747	573	6.1	2131	381	15.2	6616	192	2.8
40 - 45	13273	993	7.0	3937	684	14.8	9336	309	3.2
30 - 35	14247	1566	9.9	5682	1221	17.7	8565	345	3.9
20 - 25	11692	1407	10.7	6049	1182	16.3	5643	225	3.8
10 - 15	13883	2514	15.3	8890	2256	20.2	4993	258	4.9
01 - 05	7590	1695	18.3	6048	1623	21.2	1542	72	4.5
Total	92468	9738	9.5	35558	7848	18.1	56910	1890	3.2
Mean	38.90	26.91		25.95	23.35		46.99	41.66	
			Standard Deviation = 23.50						
			Validity (r biserial) = .26						
			Standard Deviation = 18.78						
			Validity (r biserial) = .08						
							</		

**TABLE 11**  
**Relationship Between Radio Operator Aptitude and Unsuitability Discharge from the Air Force --**  
**Overall and Within High School-Non High School Graduate Groupings**  
 (Sample: 1956 basic airman accessions to the Air Force)

Radio Operator Aptitude Percentile Scores <sup>a</sup>	Total Group			Non-High School Graduates			High School Graduates		
	Suitable Airmen	Unsuitable Airmen	Percentage Unsuitable	Suitable Airmen	Unsuitable Airmen	Percentage Unsuitable	Suitable Airmen	Unsuitable Airmen	Percentage Unsuitable
90 - 95	3328	114	3.3	243	63	20.6	3085	51	1.6
80 - 85	6414	303	4.5	853	147	14.7	5561	156	2.7
70 - 75	10310	660	6.0	1847	414	18.3	8463	246	2.8
60 - 65	11671	789	6.3	3370	573	14.3	8301	216	2.5
50 - 55	11021	942	7.9	3511	720	17.0	7510	222	2.9
40 - 45	10959	1188	9.8	4200	951	18.5	6759	237	3.4
30 - 35	12563	1437	10.3	5926	1194	16.8	6637	243	3.5
20 - 25	10899	1521	12.2	5967	1231	17.7	4932	240	4.6
10 - 15	10209	1767	14.8	5947	1557	20.7	4262	210	4.7
01 - 05	5094	1017	16.6	3694	948	20.4	1400	69	4.7
Total	92468	9738	9.5	35558	7848	18.1	56910	1890	3.2
Mean	44.72	34.63		33.91	31.96		51.48	45.71	
	Standard Deviation = 24.39			Standard Deviation = 21.54			Standard Deviation = 23.62		
	Validity (r biserial) = .21			Validity (r biserial) = .05			Validity (r biserial) = .10		

<sup>a</sup> Airman Classification Battery AC-2A

**TABLE 12**  
**Relationship Between General Aptitude and Unsuitability Discharge from the Air Force--**  
**Overall and Within High School-Non High School Graduate Groupings**  
**(Sample: 1956 basic airman accessions to the Air Force)**

General Aptitude Percentile Scores <sup>a</sup>	Total Group			Non-High School Graduates			High School Graduates		
	Suitable Airmen	Unsuitable Airmen	Percentage Unsuitable	Suitable Airmen	Unsuitable Airmen	Percentage Unsuitable	Suitable Airmen	Unsuitable Airmen	Percentage Unsuitable
90 - 95	3126	69	2.2	203	21	9.4	2923	48	1.6
80 - 85	4993	144	2.8	406	63	13.4	4587	81	1.7
70 - 75	7144	303	4.1	954	159	14.3	6190	144	2.3
60 - 65	13984	855	5.8	3126	549	14.9	10858	306	2.7
50 - 55	9113	624	6.4	2963	438	12.9	6150	186	2.9
40 - 45	14877	1332	8.2	5561	1062	16.0	9316	270	2.8
30 - 35	13577	1650	10.8	6271	1302	17.2	7306	348	4.5
20 - 25	12645	1776	12.3	7124	1524	17.6	5521	252	4.4
10 - 15	9478	1917	16.8	6373	1749	21.5	3105	168	5.1
01 - 05	3531	1068	23.2	2577	981	27.6	954	87	8.4
Total	92468	9738	9.5	35558	7843	18.1	56910	1890	3.2
Mean	43.46	30.67		32.04	27.81		50.60	42.57	
	Standard Deviation = 23.26			Standard Deviation = 19.34			Standard Deviation = 22.57		
	Validity (r biserial) = .28			Validity (r biserial) = .12			Validity (r biserial) = .15		

<sup>a</sup> Airman Classification Battery AC-2A

**TABLE 13**  
**Relationship Between Electronics Aptitude and Unsuitability Discharge from the Air Force --**  
**Overall and Within High School-Non High School Graduate Groupings**  
 (Sample: 1956 basic airman accessions to the Air Force)

Electronics Aptitude Percentile Scores <sup>a</sup>	Total Group			Non-High School Graduates			High School Graduates		
	Suitable Airmen	Unsuitable Airmen	Percentage Unsuitable	Suitable Airmen	Unsuitable Airmen	Percentage Unsuitable	Suitable Airmen	Unsuitable Airmen	Percentage Unsuitable
90 - 95	3227	75	2.3	183	27	12.9	3044	48	1.6
80 - 85	4953	162	3.2	427	96	18.4	4526	66	1.4
70 - 75	10371	477	4.4	1806	246	12.0	8565	231	2.6
60 - 65	9904	525	5.0	2374	330	12.2	7530	195	2.5
50 - 55	12340	855	6.5	3592	612	14.6	8748	243	2.7
40 - 45	12989	1200	8.5	5094	942	15.6	7895	258	3.2
30 - 35	14227	1710	10.7	6515	1350	17.2	7712	360	4.5
20 - 25	12645	1965	13.5	7429	1722	18.8	5216	243	4.5
10 - 15	8626	1737	16.8	5764	1566	21.4	2862	171	5.6
01 - 05	3186	1032	24.5	2374	957	28.7	812	75	8.5
Total	92468	9738	9.5	35558	7848	18.1	56910	1890	3.2
Mean	44.82	31.76		33.63	28.93		51.82	43.50	
Standard Deviation = 23.02			Standard Deviation = 19.49			Standard Deviation = 22.17			
Validity (r biserial) = .29			Validity (r biserial) = .14			Validity (r biserial) = .16			

<sup>a</sup> Airman Classification Battery AC-2A

In Tables 9 through 13, aptitude scores from Airman Classification Battery AC-2A are compared for suitable and unsuitable airman groups. Among the five aptitude variables comprising the battery, the Mechanical Aptitude Index was least predictive of unsuitability discharge, and the General and Electronics Aptitude Indexes were the most highly related. The most important finding was that by considering aptitude along with high-school graduation status more accurate predictions of unsuitability discharge could be made.

#### Combined Prediction

In order to determine the maximum predictor of unsuitability discharge that might be made from the varied information available, multiple regression analysis was applied to the data. Educational level, age, and the General Aptitude Index were found to offer, in combination, significantly more accurate prediction than would be obtained with any single measure or combination of two alone.

#### Implications

Application of the information presented in this report must be tempered by two major considerations: (1) the relevancy of the findings for the 1956 accession group to current procurement populations, and (2) integration of the information with current selection and screening methods. These are discussed in turn.

During 1956 the Air Force enlisted a large number of airmen who were low in aptitude and educational attainment. Department of Defense policy that over 15 per cent of the Air Force intake must be low aptitude airmen (AFQT Category IV) and the large number of trainees required to meet quotas resulted in Air Force recruitment of a sizable number of low quality airmen. The fact that many of these airmen have since been eliminated for unsuitable performance is not surprising. Current selection and screening procedures, based upon a minimum aptitude philosophy, have resulted in increased quality of procurement from an aptitude standpoint. In addition, perhaps as a concomitant of aptitude minimums, a lower percentage of non-high-school graduates (28 per cent) are being accepted for Air Force duty. With the general increase in educational level and aptitude, it would appear that unsuitability attrition rates for airmen now entering the service will be markedly lower than that found for the 1956 airman accessions. Among the reduced number of non-high-school graduates accepted by the Air Force, however, the unsuitability discharge rate should be close to 20 per cent for the full four-year enlistment.

It has been shown that unsuitability discharge is in large part associated with low educational attainment. The most dramatic way to reduce unsuitability discharge would be to require a high-school diploma from all Air Force recruits. It does not appear at the present time, however, that the Recruiting Wing would be able to meet its procurement quota if high-school graduation status were made mandatory for all enlistees. While one alternative might consist of at least "screening out" all recruits with eight or less years of education, the recruiting situation is changing so that the use of an educational screen may be feasible. First, Recruiting Service is expected to centralize its selection and screening procedures, which could result in a higher proportion of high-school-graduate intake. Secondly, the number of civilians eligible for military service will increase markedly during 1962, while airman procurement quotas will probably be decreasing. Given this more favorable selection ratio, the Air Force should be able to enlist a higher quality airman population than it has been able to in the past. The method for attaining this goal, a quality control score for each recruit, has been derived from the data presented in this report, and is available for use when required.